

Viewing Entity Information

Introduction The Info page provides information about how an aggregate (or host) is behaving. This page shows the services the aggregate is a client and a server of, as well as the number of events the aggregate is involved in. The system presents this information in both a table format and as a pie graph.

Info page layout The Info page displays a traffic graph that shows the total traffic the aggregate or host has been involved in for the selected time frame and pie charts that show how the entity is being used. These include the following:

| Chart Name | Description |
|---------------------|--|
| Top Server Services | The top services the host is a server of. |
| Top Client Services | The top services the host is a client of. |
| Top Servers Used | The top servers the host is using. |
| Top Clients Served | The top clients the host is serving. |
| Top Events | The ongoing events the host is involved in. |
| Top Vulnerabilities | The hosts that SiteProtector determines are vulnerable. Reference: See "Additional SiteProtector Information" on page 138 for a complete description. |

Table 47: Entity information pie charts

Navigating on the Info page Standard navigation and time controls apply on the Info page.
Reference: See "Navigating the Proventia Network ADS Web User Interface" on page 12.

Updating the entity information shown The system displays the aggregate or host address at the top of the page and lists any groups they contain or are members of. The system displays the information using the default *Last* time frame that covers the most recent 24 hours. You can update the information by changing the timeframe.

Changing the timeframe To change the timeframe for the entity information displayed:

1. Click the clock icon to toggle to the desired time frame.
Reference: See "Selecting the timeframe" on page 17.
2. Type or select the period for which you want to see information.
3. Click UPDATE.

Viewing the entity info tables The tables below the graphs show these top entities with additional details, appropriate to the type of table. The Other rows include a Show all link that you can click to expand the table to see the other services that weren't active enough to be in the top number shown. The tables display the client, server, and service names as a link that you can click to navigate to either another Info page or the Explore page that shows the host information.

Note: You can only expand one Other row at a time. When you expand a new row, the current row collapses.

Chapter 17: Viewing Detail Pages

**Additional
SiteProtector
information**

If you have SiteProtector configured, the Info page provides additional entity information. This includes SiteProtector information incorporated into the Events graph and table, and an additional table that shows SiteProtector vulnerabilities for that host. The Events table incorporates SiteProtector data in the display of ongoing events the host is involved in. It shows the number of times that host has been involved in the violating traffic for that event. You can click the event name to navigate to its Event Details page.

The Vulnerability table shows any hosts that SiteProtector considers vulnerable. It scans hosts to find which types of attacks a host is vulnerable to on certain services. When a host uses that service, SiteProtector tags it as a vulnerable host. Hosts listed on this page might require further investigation.

Important: SiteProtector information is not displayed when the query contains more than 255 IP addresses. The system displays a message when this occurs.

Chapter 18

Creating and Viewing Reports

Overview

Introduction Proventia Network ADS continually collects detailed host-to-host traffic data. The Reports pages allow you to generate reports from this traffic data to help you monitor how your network is being used. You can either create one-time reports or report templates that you can use to generate standard reports at specifically scheduled times.

Reports pages The Reports menu contains three pages:

| Page | Description |
|--------|--|
| Create | Create a report or report template. |
| List | View or delete existing reports. |
| Manage | Update existing report templates or recreate a report. |

Table 48: Report pages

User access on the Reports pages Administrators and analysts can perform all actions described in this chapter. Users can create and view reports, but they can only delete reports they create.

In this chapter This chapter contains the following topics:

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|-------------------------------|------|
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| Creating Reports | 142 |
| Viewing Listed Reports | 144 |
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About the Reports: Create Page

Introduction The Reports: Create page allows you to create a one-time report or a report template that you can schedule to run on a regular basis.

Create page layout Proventia Network ADS displays the name of each report type as a button along the left side of the page. Some report types are menus that contain a list of reports. When you choose a report type, the system displays the corresponding pane for you to complete that includes the information appropriate to the report type.

Note: By default, if you do not select a page when you select the Reports tab, the system displays the List page.

Pane sections Each report pane has three sections:

| Section | Description |
|----------|--|
| Setup | Use to customize the data you want the system to include in the report. |
| Filter | Use to choose filter options to limit the report results to specific entities (host, services, etc.) |
| Schedule | Use to choose the time and frequency Proventia Network ADS generates reports (report or template). |

Table 49: Report pane sections

Using the report panes to customize data Use the report form to customize the report. You can generate higher-level, overview types of reports, or very specific reports that include the type of entity, how many entities you want to see, and a corresponding time period in which to see the data.

The following examples show how you can build upon a basic report to include more specific data and to generate a recurring report:

- To create a basic version of a host Traffic report, choose the top ten hosts for the last 24 hours.
- To create a more advanced version of the same Traffic report, add a filter that limits the results to hosts within a specific group object.
- To schedule the Traffic report, set it to generate daily and email the report to your system administrator.

About report templates Templates allow you to create recurring reports that your network users can re-run. They also allow you to schedule how often you want the system to automatically generate them and who you want the system to email the reports to.

Types of Reports

Introduction This topic provides a description of the types of reports you can generate to monitor your network activity and to help you understand how it is being used.

Report types You can create many types of reports from the traffic that Proventia Network ADS collects:

| Report | Description |
|-------------------|--|
| Recent Templates | The most recently generated reports or used templates. When you select a recent template, the system creates the report. |
| Traffic | A traffic report with the specified top entities, counts, and traffic over a specific time period. |
| Top Talkers | The top x number of hosts, users, TCP services, or UDP services, and destination ports on your network. |
| Drilldown Summary | The network's top traffic contributors. This report shows the top three services on the network, then the top three servers of those services, then the top three clients of each of the servers (for those services). |
| Details | The detailed traffic information for either a host, service, or group object for a specified time period. |
| Entity to Entity | The traffic between two entities (host addresses, groups, IP addresses, or CIDRs) for the specified time period. |

Table 50: *Types of reports*

How Proventia ADS matches traffic for entity-to-entity reports

For entity-to-entity reports, when the system looks for matching traffic in the database, it tries to match traffic in the following order:

1. IP addresses
2. CIDR blocks
3. hostnames
4. group names

If the system does not recognize the value you enter in one of the fields as an existing IP, CIDR, or host name, it assumes it is a group. If it is not a group, but the system does not recognize what you entered, it displays an "invalid group" error message.

Creating Reports

- Introduction** This topic describes options for creating reports, and gives the procedures for creating reports and report templates.
- Limiting results** When limiting results to a specific entity or to traffic between specific entities, you can add multiple filter entries. The system combines each filter entry in an AND (not OR) fashion. You can select the entities from the displayed lists or use the free-form option to enter your own.
- Procedure** To create a report:
1. Select Report → Create.
The Reports: Create page appears.
 2. Select the type of report or report name you want to create from the list.
The corresponding pane appears.
 3. In the Setup section, select one of the following from the Show list:
 - **Top** to see the highest traffic generators, and then select the number of top entities to include.
 - **Bottom** to see the lowest traffic generators, and then select the number of bottom entities to include.
 4. Verify the correct entity is selected from the list.
 5. Select the time period you want to use from the During list.
 6. In the Filter section, select the type of entity you want to limit the results to from the Limit to list.
 7. Type the corresponding values in the box.
 8. For Traffic Between filters, do one of the following.
 - Select two entities from the lists.
 - Select Freeform, and then type in the value.
Enter the value as any valid IP address, CIDR, host name, or group name.
 - Click the form icon to redisplay the list of entities.
 9. Do one of the following:
 - Click the plus sign (+) to add additional filters.
 - Click the minus sign (-) to remove an existing filter.
 10. In the Schedule section, choose one of the following from the Create as list:
 - **report** to generate a one-time report, and then move to Step 15.
 - **template** to generate a recurring report.
 11. For a template, type a unique name for the template in the Named box.
Caution: If you create a report and assign it the same name as an existing template, the new report replaces the template.
You can include spaces in report names, but you cannot include the underscore character (_).
 12. Select how often you want the system to create the report from the Repeat list.

Creating Reports

13. Select the time you want the report created from the **At (times)** lists.

14. Type the report recipients email addresses in the **Email to** box.

Tip: Enter multiple addresses as a comma-separated list of email addresses.

15. Click **CREATE**.

The system displays the report status sheet to show when your report is complete.

Reference: See "Viewing Listed Reports" on page 144 for a description of the report status sheet.

Chapter 18: Creating and Viewing Reports

Viewing Listed Reports

Introduction This topic describes the status sheet, the Reports List page, and it provides the instructions for reviewing and exporting report data.

Viewing the List Page The Reports: List page shows a table that lists all reports in the system including completed reports, queued reports, and those other users have created.

Report maximums Proventia Network ADS saves and displays the most recent 500 reports, 50 per page. These include any reports you set up as a template to run on a recurring schedule. Once your list exceeds 500, it deletes the oldest reports. The system also deletes reports once they are six months old. The table lists each report as a row that includes an option button, the system-generated ID number, a description of the report, the status, and (for administrative users) a delete icon.

Report status The system displays the status as either Completed (with the time it was completed), Executing, or Queued.

Reference: See Table 51, below, for information about what each status means.

Status sheet When you run a report, Proventia Network ADS returns you to the List page and displays the status sheet. The status sheet displays a table that shows the following:

| Column | Description |
|---------------------|---|
| ID | The system-assigned number for this report. |
| Description | The system-generated description or the user-assigned template name for the report. The description is displayed as bold text if it has not been viewed.* |
| Status | Shows one of the following: <ul style="list-style-type: none"> • Executing for those currently running. • Queued for those waiting to be run. • Completed with the completion time for reports that have finished running and are available for viewing. |
| Selection check box | Use to stop or cancel a running or queued report. |

Table 51: *Report status*

Viewing the report Once the report is completed, you can view it.

To view the report:

- Click the description link.

Reference: See "Viewing Reports" on page 146.

Viewing Listed Reports

Navigating on the Reports: List page When the amount of reports exceeds the amount that the system can display on one page, Proventia Network ADS displays the page navigational tools in the upper-right corner of the page that you can use to page forward and backward or navigate to a particular page.

Reference: See "Navigating the Proventia Network ADS Web User Interface" on page 12.

Deleting or canceling a report To delete a completed report or cancel a report that is running:

1. Select the check box on the report row.
2. Click **DELETE**.

Viewing Reports

- Introduction** The View page displays a selected report's content with its corresponding tables and graphs.
- About report icons** This page displays sheet icons next to some of the table entries. These icons link to additional report data for that entry.
- Example:** If you are viewing a top services graph and HTTP is listed in the table below the graph, then you can click the form icon next to HTTP to see the top servers of HTTP traffic.
- Important:** Any time you create a sub report by clicking the report icon, Proventia Network ADS displays the most recent data that corresponds to the report period. For example, if you are looking at a report for the top services for the last 15 minutes that is 3 hours old (was run 3 hours ago), and you click the form icon for the top servers of HTTP, the system displays the top HTTP servers for the past 15 minutes, not for the original time period (3 hours ago).
- Using the report icons** The report icons at the bottom of the Reports: View page allow you to use report data in a number of ways:
- | Icon | Function |
|--------------|--|
| Detach | Opens and displays the report in a new browser window. |
| Email | Sends the report and any comments you enter to the designated recipients. |
| Print | Opens the print window for you to specify the print properties and print the report. |
| Recreate | Allows you to change the report's settings, and then generate the report. |
| Export icons | Exports the report data in the selected format. |
- Table 52: Report icons
- Using report pop-up menus** If there are multiple types of drill-down data for one table entry, the system displays a pop-up menu that lists the different types of data for you to choose from. Choose the type of information from the pop-up menu (for example, Top Hosts) to creates the report with the additional data.
- Reference:** "Status sheet" on page 144 for information about that page.
- About monthly data in reports** When you are looking at reports that show data for monthly time periods, the date range the system displays might not always correspond to the time period the data shows. The system stores monthly data in one month boundaries that correspond to how long you have been using Proventia Network ADS.
- Example:** If you initialized your system on Jan. 13, today is May 15, and you run a report for the "last six months," the report Proventia Network ADS generates shows the date range as Jan. 1 - May 14. However, since the system has no data from before January 13, it really shows data for the period of Jan. 13 - May 14.

Emailing a report To email reports, you must have an SMTP server set.

To email a report:

1. Click the Email report icon.

The email window opens.

2. Type the recipients email address in the Email to box.

Tip: Enter multiple recipients as a comma-separated list of email addresses.

3. Type any comments you want to send in the Comments box.

4. Click SEND.

Recreating a report Recreating reports allows you change the report settings. This includes renaming, further defining, or scheduling a report.

To recreate a report:

1. Click the Recreate report icon.

The Create page appears with the report pane prepopulated with the current information.

2. Update any report settings, and then click CREATE.

Reference: See "Creating Reports" on page 142 for these instructions.

Exporting reports To export a report:

1. Do one of the following:

- Click the CSV icon to export the report data in a CSV file.
- Click the PDF icon to export the report data in a PDF file
- Click the XML icon to export the report data in an XML file.

2. Save the file according to the choices your browser displays.

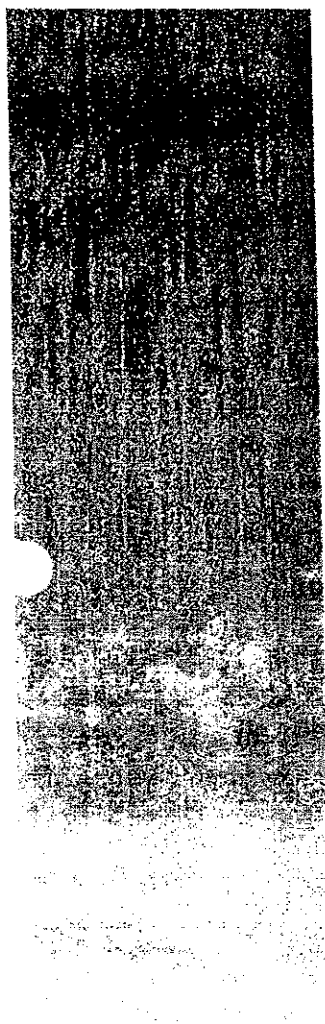
In some cases, a new window might open that displays the data.

Managing Scheduled Reports

- Introduction** This topic describes the Reports: Manage page and the actions you can perform.
- About the Reports: Manage page** Templates allow you to define a report and set it up to automatically run at specified times. The Manage page shows all existing report templates and allows you to change a template's settings.
- Reference:** See "Creating Reports" on page 142 for instructions to run a report template without making changes to the current settings.
- Navigating on the Reports: Manage page** When the number of report templates exceeds the amount that the system can display on one page, use the page navigational tools in the upper-right corner of the page to page forward and backward or navigate to a particular page.
- Reference:** See "Navigating the Proventia Network ADS Web User Interface" on page 12 for additional information.
- Report templates table** The table shows the following information:
- | Column | Description |
|---------------------|---|
| ID | Shows the system-assigned ID number of the report. |
| Description | The user-assigned report name or system-assigned name. |
| Period | How often the system creates the report. |
| Email | The email addresses for all recipients scheduled to receive the report. |
| Selection check box | Use to delete reports. |
- Table 53: Report templates table**
- Changing report template settings** To change a report's settings:
1. Click the template Description link.
The Create page appears with the report pane prepopulated with the current information.
 2. Update any report settings.
Reference: See "Creating Reports" on page 142 for these instructions.
 3. Click CREATE.
- Deleting a template** To delete a template:
1. Select the check box on the template row.
 2. Click DELETE.
ADS removes the template, but saves all reports already generated from the template.



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Appendixes

Appendix A

Using PFCAP Expressions

Overview

Introduction

Some of the Web user interface pages allow you to search by entering PFCAP expressions for the system to use to match traffic. You can enter the traffic values, such as a specific type of traffic (TCP), the name of a group object, or a specific host that you want to search for in the Search text box, and the system returns all matching traffic. The system displays the expression it uses to match traffic at the top of the page, similar to a page title.

In this appendix

This appendix contains the following topics:

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|--------------------------------------|------|
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| Example Expressions | 155 |

Appendix A: Using PFCAP Expressions

Searching by Using PFCAP Expressions

- Introduction** This topic describes how to construct a PFCAP expression and how Proventia Network ADS evaluates them.
- Pages that allow PFCAP searching** You can search by entering PFCAP expressions on the following pages:
- Explore
 - Policy
 - Host Detail
 - Alert Detail
 - Flows
- You can also use the search boxes on these pages to further filter the matching results, adding to the existing search expression. When you enter an additional value in the text box and click **SEARCH**, the system appends and updates the existing expression and shows the new matching traffic. In addition to adding Search expressions, you can **CLEAR** the Search text box to enter a new PFCAP expression and start again.
- Joining expressions** When entering PFCAP expressions that specify the traffic you want Proventia Network ADS to match, use the following to join or describe expressions:
- **OR**—joins expressions together, either can be true. You can also enter multiple search values as a comma-separated list.
 - **AND**—joins expressions together, both are true.
 - **NOT**—negates an expression.
 - **(parentheses)**—establishes precedence for complicated expressions.
- How Proventia ADS evaluates expressions** Proventia Network ADS evaluates rules with ANDs and ORs with equal precedence, and it evaluates them from left to right. If you are using a combination of adjacent objects with AND and OR conjunctions, use parentheses so the system knows the explicit order.
- If you have not specified an AND or an OR conjunction, Proventia Network ADS uses an OR if the objects are the same type and an AND if they are different types. This is called merging.
- How ADS evaluates objects** Table 54 shows the types of objects. Objects that appear in the same row would be ORd together, and objects on different rows would be ANDd together.

| Direction | Type |
|-----------------------------|--------------------------|
| Source | IP address, group object |
| Destination | IP address, group object |
| Both source and destination | IP address, group object |
| Source | Port, port object |
| Destination | Port, port object |

Table 54: How objects are merged

Searching by Using PFAP Expressions

| Direction | Type |
|-----------|-----------|
| None | Protocol |
| None | TCP flags |
| None | ICMP type |
| None | ICMP code |

Table 54: How objects are merged (Continued)

Examples

Proventia Network ADS would interpret this expression:

`port 22 1.1.1.1 2.2.2.2 port 333`

as this:

`(port 22 or port 333) and (1.1.1.1 or 2.2.2.2)`

and it would interpret this expression:

`group webserver portgroup www-ports port 333 1.1.1.1`

as this:

`(portgroup 1.1.1.1 or port 333) and (group webserver or 1.1.1.1)`

Expressing direction You can also use a variety of synonyms to express direction for IPs, groups (host and port), ports, and users.

To specify a source, you can enter any of the following specifiers:

- `src`
- `source`
- `from`
- `client`

Direction examples The following examples show how to express directions.

Entering "`src 1.2.3.4`" is equal to entering "`from 1.2.3.4`".

To specify a destination, you can enter any of the following specifiers:

`dst`
`dest`
`destination`
`to`
`target`
`server`

If you do not set a direction for IP addresses, host groups, or users, Proventia Network ADS uses both source and destination.

Appendix A: Using PFCAP Expressions

Example: If you entered IP address "1.2.3.4", the system interprets it as:

(src 1.2.3.4) or (dst 1.2.3.4)

If you do not set a direction for ports or port groups, Proventia Network ADS uses the destination.

Example: If you entered "port 33", the system interprets it as:

(dst port 33)

Example: If you entered "portgroup www-ports" the system interprets it as:

(dst portgroup www-ports)

Example Expressions

| | |
|-----------------------|---|
| Introduction | This topic provides examples of the types of PFCAP expressions you can enter to search the Proventia Network ADS traffic database and to create rules. |
| Group objects | <p>For groups, enter the group name, or you can enter the group specifier, followed by the group name. To search for a group whose name contains spaces, you must surround the group name in quotation marks (for example, "web servers").</p> <p>To search for a group called <i>webservers</i>, enter one of the following:</p> <pre>webservers</pre> <pre>group webservers</pre> <p>In this case, the system matches any source or destination that is part of the <i>webservers</i> group.</p> <p>Note: If you use the "group" specifier but the system cannot find a valid group by that name, it looks for that name as a port group.</p> |
| Port objects | <p>For port groups, enter either the port group name, or you can enter the portgroup or pgroup specifiers, followed by the port group name.</p> <p>To search for a port group called <i>www-ports</i>, enter one of the following:</p> <ul style="list-style-type: none"> ● www-ports ● portgroup www-ports ● group www-ports <p>In this case, the system matches any source or destination that is part of the <i>www-ports</i> port group.</p> |
| Hosts or CIDRs | <p>For hosts, enter either the IP address, the group name, or specify whether it is the source or destination by typing any of the source or destination specifiers listed in the section "Expressing Direction," followed by the IP address or group name. You can also enter networks in CIDR notation (IP/(slash) number) or by specifying that it is a host IP by entering the keyword host.</p> <p>To search for a network, enter:</p> <pre>198.168.1.0/24</pre> <p>The system matches any source or destination that is part of the 198.168.1.0/24 network.</p> <p>To further filter the results to only show the network as a source, you can enter the src specifier before the network in the Search text box:</p> <pre>src 198.168.1.0/24</pre> |

Appendix A: Using PFCAP Expressions

| | |
|------------------|--|
| Ports | <p>Enter ports with the keyword port followed by the port name or number. You can enter a port range by entering port followed by the beginning port number, .. (dot dot) and the port at the end of the range.</p> <p>You can also specify whether you want the system to match ICMP types and ICMP codes as either numbers or ranges, by entering the icmptype or icmpcode specifiers, and then following with either a number or a number range.</p> <p>To search for port 22, enter:</p> <pre>port 22</pre> <p>To specify destination port 22, enter:</p> <pre>dst port 22</pre> <p>To search for port ranges 0-1024, enter:</p> <pre>port 0..1024</pre> <p>You can also enter descriptions such as ssh as a quick search for TCP and port 22, or you can enter the same search as:</p> <pre>TCP and port ssh</pre> <p>To search for web traffic on IP address 1.2.3.4, port 22, enter:</p> <pre>1.2.3.4 port 22</pre> <p>To search for any traffic with a destination IP address of 1.2.3.4 and a destination port of either 22 or 80, enter:</p> <pre>dst 1.2.3.4 port 22, www</pre> <p>To match either source 1.2.3.4 or source 1.2.3.5 and destination group accounting on port 80, enter:</p> <pre>(src 1.2.3.4 or src 1.2.3.5) and dst accounting port 80</pre> <p>The system matches any traffic from either 1.2.3.4 or 1.2.3.5 with a destination port of 80 in the accounting group.</p> <p>To search for ICMP Echo Request traffic, enter:</p> <pre>icmptype 8</pre> |
| Protocols | <p>Enter protocols by entering the keyword proto followed by the protocol name or number.</p> <p>To search for protocol 6 traffic, enter one of the following:</p> <ul style="list-style-type: none"> • tcp • proto tcp • proto 6 |

Example Expressions

Using Specifiers for Duplicate Values

If you enter a value in the search text box that is ambiguous (could match multiple types of traffic), the system displays a message to inform you of this and includes all traffic for the values and adds the appropriate specifiers.

Example:

If you have a group named "webservers" and you also have a port group named "webservers," and you enter "webservers" in the Search box without specifying whether you want results for the group or the port group, the system returns traffic for both and inserts the specifiers (group and portgroup) in the results. In this case, it would display:

"group webservers" or "portgroup webservers"

You can then delete whichever value you do not want and click SEARCH and Proventia Network ADS updates the page to show only the requested matching traffic.

Appendix A: Using PFCAP Expressions

Glossary

a

ACL (Access Control List)—A list composed of rules and filters stored in a router to allow, deny, or otherwise regulate network traffic based upon network parameters such as IP addresses, protocol types, and port numbers.

address—A coded representation that uniquely identifies a particular network identity.

Analyzer—A centralized device that accepts event messages from one or more Collectors and performs second-order traffic analysis in order to identify and visualize potential attacks.

anomaly—An event or condition in the network that is identified as an abnormality when compared to a predefined illegal traffic pattern.

API (Application Programming Interface)—A well-defined set of function calls providing high-level controls for underlying services.

ARP (Address Resolution Protocol)—A protocol for mapping an IP address to a physical machine address.

ADOS (Anomaly Detection System)—The Proventia Network ADS Operating System. ADOS manages many of the low-level system processes and communication facilities.

ASCII (American Standard Code for Information Interchange)—A coded representation for standard alphabetic, numeric, and punctuation characters.

Authentication—An identity verification process.

b

Behavior—Who hosts on your network talk to and how they talk to them. When Proventia Network ADS sees behavior that does not match existing rules, it sends event notifications to the operator for action.

Black hole routing—A technique to route traffic to null interfaces that can never forward the traffic.

c

CAR (Committed Access Rate)—A tool for managing bandwidth that provides the same control as ACL with the additional property that traffic can be regulated based on bandwidth usage rates in bits per second.

CIDR (Classless Inter-Domain Routing)—Method for classifying and grouping Internet addresses.

cflowd—Developed to collect and analyze the information available from NetFlow. It allows the user to store the information and enables several views of the data. It produces port matrices, AS matrices, network matrices, and pure flow structures.

Collector—A device that gathers network information from adjacent routers via NetFlow™ and performs first-order traffic analysis. Anomalous events are compressed into event messages that are then sent to the listening Analyzer.

customer—An ISP, ASP, or enterprise user of ISS technology.

d

Dark IP—Regions of the IP address space that are reserved or known to be unused.

DNS (Domain Name System)—A system that translates numeric IP addresses into meaningful, human-consumable names and vice-versa.

DoS (Denial of Service)—An interruption of network availability typically caused by malicious sources.

e

encryption—The process by which plain text is scrambled in such a way as to hide its content.

exploit—Tools intended to take advantage of security holes or inherent flaws in the design of network applications, devices, or infrastructures.

f

firewall—A security measure that monitors and controls the types of packets allowed in and out of a network, based on a set of configured rules and filters.

i

ICMP (Internet Control Message Protocol)—An IP protocol that delivers error and control messages between TCP/IP enabled network devices, for example, ping packets.

IP (Internet Protocol)—A connectionless network layer protocol used for packet delivery between hosts and devices on a TCP/IP network.

IP Address—A unique identifier for a host or device on a TCP/IP network.

l

LAN (Local Area Network)—A typically small network that is confined to a small geographic space.

m

MAC (Media Access Control) Address—A unique hardware number associated with a networking device.

MPLS (Multiprotocol Label Switching)—A packet-switching protocol developed by the Internet Engineering Task Force (IETF) initially to improve switching speeds, but other benefits are now seen as being more important.

NetFlow—A technology developed by Cisco Systems, Inc. that allows routers and other network devices to periodically export information about current network conditions and traffic volumes.

NTP (Network Time Protocol)—A protocol that is used to synchronize clock times in a network of computers.

p

PFCAP (Flow Capture) Filter—A string-based, regular expression used to filter traffic on your Proventia Network ADS Analyzer appliance.

packet—A unit of data transmitted across the network that includes control information along with actual content.

password—A secret code used to gain access to a computer system.

policy—The set of behaviors that network operators determine to be acceptable or unacceptable for their network and are the standard that Proventia Network ADS measures host behaviors against.

protocol—A well-defined language used by networking entities to communicate with one another.

r

RADIUS (Remote Authentication Dial In User Service)—A client/server protocol that enables remote access servers to communicate with a central server to authenticate dial-in users and authorize their access to the requested system or service.

refinement—The process of continually gathering information about prior anomalous activity seen.

report—A periodic summary of anomalous activity on the network.

router—A device that connects one network to another. Packets are forwarded from one router to another until they reach their ultimate destination.

rules—The traffic flows that are either allowed or denied that serve as the standards Proventia Network ADS uses to determine when behavior matches the current policy.

s

SNMP (Simple Network Management Protocol)—A standard protocol that allows routers and other network devices to export information about their routing tables and other state information.

SSH (Secure Shell)—A command line interface and protocol for securely getting access to a remote computer. SSH is also known as Secure Socket Shell.

t

TACACS+ (Terminal Access Controller Access Control System +)—An authentication protocol common to Unix networks that allows a remote access server to forward a user's logon password to an authentication server to determine whether that user is allowed to access a given system.

Target—A victim host or network of a worm or other malicious denial of service (DoS) attacks.

TCP (Transmission Control Protocol)—A connection-based, transport protocol that provides reliable delivery of packets across the Internet.

TCP/IP—A suite of protocols that controls the delivery of messages across the Internet.

U

UDP (User Datagram Protocol)—An unreliable, connectionless, communication protocol.

UNC (Universal Naming Convention)—A standard which originated from the UNIX for identifying servers, printers, and other resources in a network. A UNC path preceeds the name of the computer with double slashes or backslashes. The path within the computer are separated with a single slash or backslash, as follows:

| | |
|---------------------|-------------------|
| in UNIX, | //servername/path |
| in Windows and DOS, | \\servername\path |

X

XML (eXtensible Markup Language)—A metalanguage written in Standard Generalized Markup Language (SGML) that allows one to design a markup language for easy interchange of documents on the World Wide Web.

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